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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
CHAU, COREY P	
ART UNIT	**PAPER NUMBER**
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/665,142	KAKUHARI ET AL.	
	Examiner	Art Unit	
	Corey P. Chau	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *11-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-10,15 and 16* is/are rejected.

7)☒ Claim(s) *5* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/22/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 11-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/22/2007.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 8-9, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6959092 to Berkhoff et al. (hereafter as Berkhoff).

4. Regarding Claim 1, Berkhoff discloses a noise reduction apparatus for reducing noise propagated toward a predetermined space on one side of a wall from an external noise source on another side of the wall, comprising:

a control sound source, which is placed on the wall so as to block a noise propagation path, for radiating a sound into the predetermined space (Figs. 1a-c; column 4, lines 24-27);

a sound detector for detecting a sound propagated from the noise source through the control sound source (Figs. 1a-c; column 4, lines 28-35); and

a control section for causing the control sound source to radiate a sound so as to minimize a sound to be detected by the sound detector, based on results detected by the sound detector (Figs. 1a-c; column 4, line 55 to column 5, line 30).

5. Regarding Claim 2, Berkhoff discloses a housing, which is attached to the surface of the wall so as to face the noise source, for generating space for noise reduction between the housing and the wall; wherein the control sound source is placed on the housing attached to the surface of the wall; the sound detector is placed in the space for noise reduction; and the control sound source radiates a sound into the space for noise reduction (Fig. 1a; column 4, lines 24-49).

6. Regarding Claim 8, Berkhoff discloses the control section is placed in the space for noise reduction (Figs. 1a-c; column 4, line 55 to column 5, line 30).

7. Regarding Claim 9, Berkhoff discloses a noise detector placed outside the predetermined space for detecting the noise, wherein the control section generates the control signal based on results detected by the sound detector and the noise detector (Figs. 1a-c; column 4, line 55 to column 5, line 30).

8. Claim 15 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

9. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5848169 to Clark, Jr et al. (hereafter as Clark).

10. Regarding Claim 1, Clark discloses a noise reduction apparatus for reducing noise propagated toward a predetermined space on one side of a wall from an external noise source on another side of the wall, comprising:

a control sound source, which is placed on the wall so as to block a noise propagation path, for radiating a sound into the predetermined space (Figs. 6a-b, 7, and 10; column 6, lines 13-47; column 7, lines 13-28);

a sound detector for detecting a sound propagated from the noise source through the control sound source (Figs. 6a-b, 7, and 10; column 6, lines 13-47; column 7, lines 13-28); and

a control section for causing the control sound source to radiate a sound so as to minimize a sound to be detected by the sound detector, based on results detected by the sound detector (Figs. 6a-b, 7, and 10; column 6, lines 13-47; column 7, lines 13-48).

11. Regarding Claim 2, Clark discloses a housing, which is attached to the surface of the wall so as to face the noise source, for generating space for noise reduction between the housing and the wall; wherein the control sound source is placed on the housing attached to the surface of the wall; the sound detector is placed in the space for noise reduction; and the control sound source radiates a sound into the space for noise reduction (Figs. 6a-b, 7, and 10; column 6, lines 13-47; column 7, lines 13-28).

12. Claims 1-4, 6-7, 9, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6160892 to Ver.

13. Regarding Claim 1, Ver discloses a noise reduction apparatus for reducing noise propagated toward a predetermined space on one side of a wall from an external noise source on another side of the wall, comprising:

a control sound source, which is placed on the wall so as to block a noise propagation path, for radiating a sound into the predetermined space (Figs. 1-6 and 11-14; column 4, lines 32-38);

a sound detector for detecting a sound propagated from the noise source through the control sound source (Figs. 1-6 and 11-14; column 4, lines 32-50); and

a control section for causing the control sound source to radiate a sound so as to minimize a sound to be detected by the sound detector, based on results detected by the sound detector (Figs. 1-6 and 11-14; column 4, lines 32-50).

14. Regarding Claim 2, Ver discloses a housing, which is attached to the surface of the wall so as to face the noise source, for generating space for noise reduction between the housing and the wall; wherein the control sound source is placed on the housing attached to the surface of the wall; the sound detector is placed in the space for noise reduction; and the control sound source radiates a sound into the space for noise reduction (Figs. 1-6 and 11-14; column 4, line 15 to column 5, line 13).

15. Regarding Claim 3, Ver discloses a plurality of housings are attached to the surface of the wall adjacently to each other, and the noise reduction apparatus further comprises a vibration damping section for damping a vibration in a position of a barycenter of each portion of the surface of the wall, which is divided by the plurality of

housings having space for noise reduction (Figs. 1-6 and 11-14; column 3, line 46 to column 5, line 56; column 7, lines 1-16).

16. Regarding Claim 4, Ver discloses the vibration damping section is a pole connecting the housing with the wall (Figs. 2-6 and 11-14; column 4, lines 15-31).

17. Regarding Claim 6, Ver discloses the vibration damping section is a plummet placed in the position of the barycenter (Figs. 1-6 and 11-14; column 3, line 46 to column 5, line 56; column 7, lines 1-16).

18. Regarding Claim 7, Ver discloses a film, which is connected to the housing, for generating a closed space between the film and the control sound source (i.e. Applicant has not clearly define in the claim what is a "film", which the examiner can broadly interpret that term in any manner consistent with the term) (Figs. 1-6 and 11-14; column 3, line 46 to column 5, line 56).

19. Regarding Claim 8, Ver does not expressly disclose the control section is placed in the space for noise reduction. However, the examiner takes Official Notice that it is well known in the art to have the control section is placed in the space for noise reduction in order to reduce space. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ver to have the control section is placed in the space for noise reduction in order to reduce space.

20. Regarding Claim 9, Ver discloses a noise detector placed outside the predetermined space for detecting the noise, wherein the control section generates the control signal based on results detected by the sound detector and the noise detector (Figs. 4 and 6; column 5, lines 14-47)

21. Claim 15 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

22. Claims 1-2, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6192133 to Enamito et al. (hereafter as Enamito).

23. Regarding Claim 1, Enamito discloses a noise reduction apparatus for reducing noise propagated toward a predetermined space on one side of a wall from an external noise source on another side of the wall, comprising:

a control sound source, which is placed on the wall so as to block a noise propagation path, for radiating a sound into the predetermined space (Figs. 2-10 and 12; column 9, lines 1-9; column 10, lines 23-33; column 13, lines 27-35);

a sound detector for detecting a sound propagated from the noise source through the control sound source (Figs. 2-10 and 12; column 9, lines 1-9; column 10, lines 23-33; column 13, lines 27-40); and

a control section for causing the control sound source to radiate a sound so as to minimize a sound to be detected by the sound detector, based on results detected by the sound detector (Figs. 2-10 and 12; column 9, lines 1-19; column 10, lines 23-37; column 13, lines 27-46).

24. Regarding Claim 2, Enamito discloses a housing, which is attached to the surface of the wall so as to face the noise source, for generating space for noise reduction between the housing and the wall; wherein the control sound source is placed on the housing attached to the surface of the wall; the sound detector is placed in the

space for noise reduction; and the control sound source radiates a sound into the space for noise reduction (Figs. 2-10 and 12; column 9, lines 1-19; column 10, lines 23-37; column 13, lines 27-46).

25. Regarding Claim 7, Enamito discloses a film, which is connected to the housing, for generating a closed space between the film and the control sound source (i.e. Applicant has not clearly define in the claim what is a "film", which the examiner can broadly interpret that term in any manner consistent with the term) (Figs. 2-10 and 12; column 9, lines 1-19; column 10, lines 23-37; column 13, lines 27-46).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

27. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6959092 to Berkhoff in view of USPN 5363451 to Martinez et al. (hereafter as Martinez).

28. Regarding Claim 10, Berkoff discloses loudspeaker (Figs. 1a-c), but only generally; no specific hardware is taught. Therefore it would have been obvious to one have ordinary skill in the art to seek known speakers. Martinez for example, discloses speakers, which are piezoelectric transducer (Fig. 2a; column 4, lines 26-44). It would have been obvious to one having ordinary skill in the art at the time the invention was

made to employ any known speakers, such as that of Martinez. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Berkoff with the teaching of Martinez to utilize loudspeakers which are piezoelectric loudspeakers.

29. Claim 16 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

30. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5848169 to Clark in view of USPN 5363451 to Martinez.

31. Regarding Claim 10, Clark discloses loudspeakers (Figs. 6a-b, 7, and 10), but only generally; no specific hardware is taught. Therefore it would have been obvious to one have ordinary skill in the art to seek known speakers. Martinez for example, discloses speakers, which are piezoelectric transducer (Fig. 2a; column 4, lines 26-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any known speakers, such as that of Martinez. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Clark with the teaching of Martinez to utilize loudspeakers which are piezoelectric loudspeakers.

32. Claim 16 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

33. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6160892 to Ver.

34. Regarding Claim 5, Ver discloses a pole and microphones (i.e. sound detector), but does not expressly disclose the sound detector is connected to the pole. The sound detector connected to the pole has no patentable significance unless new and unexpected result is produced, therefore it would have been obvious to one having ordinary skill in the art to modify Ver to place the microphone at any location in the space, such as the pole which would still perform the desired operation.

35. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6160892 to Ver in view of USPN 5363451 to Martinez.

36. Regarding Claim 10, Ver discloses loudspeakers (Figs. 1-6 and 11-14), but only generally; no specific hardware is taught. Therefore it would have been obvious to one have ordinary skill in the art to seek known speakers. Martinez for example, discloses speakers, which are piezoelectric transducer (Fig. 2a; column 4, lines 26-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any known speakers, such as that of Martinez. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ver with the teaching of Martinez to utilize loudspeakers which are piezoelectric loudspeakers.

37. Claim 16 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

38. Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6192133 to Enamito in view of USPN 5363451 to Martinez.

39. Regarding Claim 10, Enamito discloses speakers but only generally; no specific hardware is taught. Therefore it would have been obvious to one have ordinary skill in the art to seek known speakers. Martinez for example, discloses speakers, which are piezoelectric transducer (Fig. 2a; column 4, lines 26-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ any known speakers, such as that of Martinez. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Enamito with the teaching of Martinez to utilize loudspeakers which are piezoelectric loudspeakers.

40. Claim 16 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

Conclusion

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is 571-272-7514. The examiner can normally be reached on Monday-Friday, 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 2, 2007
CPC

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600